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January 9, 2003

RECEIVED
JAN 2003
NMED Hazardous Waste Bureau

Mr. Steve Zappe
New Mexico Environment Department
2905 Rodeo Park Drive, Building E
Santa Fe, NM 87505

Dear Mr. Zappe:

Thank you for your transmittal of the *WIPP Engineering Analysis Report on Stability of Explosion Wall, December 19, 2002* to EEG on Friday, December 20, 2002. While there is no formal comment period associated with a Class 1* PMR, in your transmittal you encouraged "feedback as soon as possible to improve the likelihood that (NMED would) be able to read it before making a final determination". However, because of the holiday season, the EEG was unable to respond prior to the NMED review and subsequent approval of the modification on Thursday, December 26, 2002. Why did NMED ask for comments when there was only one working day, December 23, available for an evaluation of a report that took DOE's contractors weeks to prepare?

The EEG has reviewed the report which you supplied, and based upon the modeling results, finds no problems with the structural integrity of the proposed explosion wall design for a duration of five years. However, the EEG has not been provided with the actual model input and has therefore not compared this input with the insitu measurements that were used by the DOE to verify the FLAC model. This would have been difficult in the time allowed between NMED's receipt of the engineering report and their approval of the modification.

The EEG has inspected the other block walls in the underground referred to in the DOE's letter to NMED of November 21, 2002. The performance of these walls was offered by the DOE as comparable to the proposed explosion wall. However, these walls are of different construction materials and design. Based upon this, EEG's opinion is that the proposed wall's structural integrity should be assessed from the engineering analysis alone.

As noted in the report, the EEG agreed with the DOE that a methane explosion was unlikely for at least 15 years after panel closure. This was based on the EEG's review of the DOE's gas generation calculations. EEG had stated a concern in EEG-82 that, while a methane explosion was unlikely during the required 180 day bulkhead construction period, the 12 foot explosion wall may not withstand the postulated explosive force. The DOE notes that in EEG's check of the panel closure design a reduced masonry compressive strength was used and the effects of lateral loading due to creep were ignored. The DOE states that these assumptions resulted in a conservative approach that is appropriate for design but not in assessment of actual wall behavior. The DOE's comments are consistent with the EEG's intent of EEG-82, which was to evaluate proposed panel closure modifications, i.e. a new design. As stated on page 19 of Appendix B to EEG-82, "The ability of the planned explosion-isolation masonry walls to resist the 480 psi explosion pressure was **conservatively** checked using the water impoundment bulkhead design method (emphasis added). It could be argued that given the inherent uncertainties of geomechanics, a conservative analysis may be more appropriate for the current prediction of the 12 foot wall performance.

Sincerely,

James K Channell

for Matthew K. Silva
Director

MKS:LEA:pf

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